MEMORANDUM

TO: File

FROM: Carey A. Johnston, P.E.
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DATE: 20 December 2012

SUBJECT: Response to State Comments on Version 1.1 Release

Overview

The Clean Water Act Action Plan "Master Project List" identifies the enhancement and release of the Loading Tool as a key task for implementing Fundamental Change 1 and 3.[1] OECA released Version 1.0 of the Loading Tool in January 2012. OECA continually receives comments and suggestions from EPA, state, and public on what is working and how to improve this web application.

New Enhancements to the Loading Tool

In response to comments and suggestions OECA has developed the following new enhancements to the Loading Tool for Version 1.1:

- Incorporated 2011 DMR and TRI data into the Loading Tool;
- Provided more flexibility in the Loading Tool such as
  - Making it easy to search for TRI listed chemicals and CERCLA hazardous substances in the DMR data; and
  - Making it easier to search and download facility level data based on facility and permit data.
- More documentation on how to use the Loading Tool for the general public and technical users;
- Created a GovDelivery mailing list for users to receive updates on the Loading Tool;
- Developed web services to promote the use of the data and support the development of the ECHO multi-year pollutant loading report; and
- Minor bug fixes.

[1] See also – "CWA Action Plan Implementation Priorities," http://www.epa.gov/compliance/resources/publications/civil/programs/cwa/actionplan-implpriorities.pdf.

EPA and State Review of Version 1.1

OECA released Version 1.1 of the Loading Tool to states and EPA Headquarters and Regional offices on 7 September 2012 for a two week review. This review was facilitated by a password protected website. OECA shared this link and password on its OTIS Lab website. OECA also sent e-mails announcing this two-week review to ACWA, ECOS, Water Data Stewards, NPDES Compliance and Enforcement Managers, and EPA HQ CWA Contacts.

Summary of State Comments

- State commenters included Kentucky (Mark J. Cleland), Alabama (Daphne Smart), South Dakota (Albert Spangler), Connecticut (Rowland Denny), Tennessee (Lawrence Bunting), and Mississippi (Chris Sanders).

- Data quality of the underlying DMR data was the focus of all six state commenters.
    - Albert (South Dakota) noted that the largest discharger in South Dakota is 20 MGD. He recommended that any facility in South Dakota with flows greater that 20 MGD should be flagged as potentially in error.
    - Mark (Kentucky) noted that they are pulling flow data that appear to be in error in ICIS and making the corrections in the ICIS DMR data themselves.
    - Daphne (Alabama) has also made error corrections to flow data in ICIS and has concerns about these error corrections not being incorporated into the Loading Tool database. The Loading Tool database is built using data extracts from PCS and ICIS with regular updates from OEI's Integrated Error Correction Process.
    - Rowland (CT) and other states provided a few examples of erroneous DMR data.

  These commenters noted that they do not use the OEI Integrated Error Correction Process (IECP) to record error corrections, which is the main way that OECA uses to update the Oracle database supporting the Loading Tool.

- South Dakota also noted problems in how the Loading Tool calculates pollutant loadings for intermittent dischargers. Some facilities have intermittent discharges and may have one or more outfalls that don't discharge for one or more months. Both PCS and ICIS-NPDES have ways of identifying when there is no discharge at a particular outfall for a monitoring period. However, states do not all use the same method and codes for identifying these intermittent dischargers (e.g., ICIS-NPDES has three codes for reporting the Duration of Discharge: 50037, 82517, and 81381). Consequently, the tool may overestimate

pollutant discharges for intermittent dischargers that only discharge in emergency situations (i.e., facilities with unscheduled limit sets).

Summary Response to State Comments

- EPA makes every possible effort to present quality data to the public and identifies limitations to data users. The database supporting this online tool uses data extracts from PCS and ICIS with regular error correction updates from EPA's IECP. The IECP allows EPA to track and incorporate into the Loading Tool database error corrections submitted by the public. EPA also works with states to identify any error corrections that they make to their data outside of the IECP. In FY13 EPA will automate the refresh of the Loading Tool database with ICIS data as all states will be in ICIS after December 2012.

- EPA corrected all DMR data in the Loading Tool database for each specific example of erroneous data identified by state commenters.

- EPA will work with states to identify the DMR error corrections that they make in their data. After the migration of all PCS states to ICIS EPA can begin the process of automating extracts from ICIS on a monthly basis for the Loading Tool database. This will enable EPA to more completely catch all of the error corrections made in ICIS-NPDES.

- EPA will work with states to improve pollutant discharge calculations for intermittent dischargers with the release of Version 1.2.

Additional Follow-up with State Commenters

- OECA/OC (Carey Johnston) sent e-mail invitations on 29 November 2012 to the Region 4 states that provided comments on the Loading Tool (Version 1.1). The invitation noted that these meetings would allow states to ask questions, elaborate on their previous comments, and share new comments on the Loading Tool with EPA. To date only one state (Kentucky) requested a meeting with EPA.

- On 17 December 2012 OECA/OC (Carey Johnston) held a webinar with Kentucky (Mark Cleland and his KY DEP colleagues). This webinar was very productive and EPA was able to answer all of KY DEP's questions and demonstrate some of the key features of the Loading Tool (e.g., flagging of potential data outliers or errors).

- In particular, EPA explained how it developed the Loading Tool database and how it is currently maintained. EPA discussed how the Loading Tool database is currently a

'frozen' data set with regular updates to incorporate error corrections identified via EPA's IECP. In the near term – KY DEP stated that they would forward to EPA a list of KY NPDES IDs with recently corrected DMR data, which were corrected outside of the IECP. These NPDES ID's were sent to EPA on December 19th and EPA is now in the process of pulling these corrected flow values from ICIS-NPDES and updating the Loading Tool database.

- EPA also shared with KY DEP the preliminary plans for possible enhancement in FY13. EPA would like to set-up an automatic (computer-to-computer) process for pulling ICIS-NPDES data and calculating pollutant loads. Deploying this enhancement will depend on obtaining the necessary funding. KY DEP (Mark Cleland) noted that it is important that EPA invest in building this automatic connection between the Loading Tool Oracle database and ICIS-NPDES as this will automatically sync these two databases and eliminate the need for states to separately track error corrections and the need to transmit these NPDES IDs to EPA.

Detailed Responses to State Comments

Commenter: Alabama
Comment Date: 9/14/2012
Comment Number: 1

Alabama has performed a very cursory review of the DMR Pollutant Loading Tool and has SERIOUS concerns regarding the validity of the data being represented. For the 2010 year, the DMR loading tool is reporting that Alabama has Zinc discharges of 8,622,337,117 lb/yr. The tool lists the top facility discharge of zinc as National Copper and Smelting Co (AL0029483) with 8,621,535,615 lb/yr. The flow from this facility is grossly over reported in the loading tool. We have confirmed that ICIS has flows reported more in the range of < 0.5 MGG not 36 MGD as reported in the tool. This results in grossly over reported pollutant levels. The state takes every effort to ensure data in ICIS is correct. When data is extracted from the primary database (ICIS/PCS), manipulated, and incorrectly reported in other tools, the state has to expend additional resources to QA/QC the data in other formats to ensure accurate reporting. In addition, it is vital that incorrect information is not conveyed to the public. When inaccurate information is reported and the state receives inquiries, we must utilize resources to verify and respond which requires time to be expended on items other than completion of core program requirements. While, this one item has been noted, it is expected that similar other errors are included in the DMR Reporting Tool and EPA should not release this information until it is confirmed that the data is accurately represented.

EPA Response: EPA makes every possible effort to present quality data to the public and identifies limitations to data users. The database supporting this online tool uses data extracts from PCS and ICIS-NPDES with regular error correction updates from EPA's Integrated Error Correction Process (IECP). The IECP allows EPA to track and incorporate into the Loading Tool database error corrections submitted by the public. EPA also works with states to identify any error corrections that they make to their data outside of the IECP. EPA corrected all DMR data in the Loading Tool database for each specific example of erroneous data identified by state commenter. In FY13 EPA will automate the refresh of the Loading Tool database with ICIS data as all states will be in ICIS after December 2012.

The commenter noted that EPA should not release DMR data until it is "accurately represented." EPA disagrees with this approach as the volume and distributive nature of DMR data entry by 46 state NPDES programs makes unworkable the task of coordinating and fixing all DMR errors prior to every public release. EPA and states are adding and changing DMR data every day. EPA notes that public access to DMR data is a key part of the Agency's Clean Water Act Action Plan. In particular, the Plan identified "making inspection reports and discharge monitoring reports publicly available" as a key part of improving compliance and environmental protection. Making DMR data publically available, even erroneous data, provides a beneficial effect of allowing different perspectives from multiple stakeholders (e.g., states, regulated entities, public) access to all DMR data, which will help broaden the review of the DMR data and identify erroneous data that require correction. EPA also notes that it flags pollutant loading calculations when the underlying DMR data contain outliers or erroneous data. These flags are show as blue flags in the DMR Pollutant Loading Tool.

Commenter: Alabama
Comment Date: 10/19/2012
Comment Number: 2

It is unreasonable for EPA to expect states to notify EPA every time data is corrected in ICIS. EPA should resolve the issues with ECHO and any associated tools prior to releasing them to the public.

EPA Response: See response to Comment #1. In particular, in FY13 EPA will automate the refresh of the Loading Tool database with ICIS-NPDES data as all states will be in ICIS-NPDES after December 2012. In the interim states are welcome to periodically send EPA lists of NPDES permit numbers with corrected DMR data that were fixed by states outside EPA's IECP.

Commenter: Alabama
Comment Date: 8/29/2012
Comment Number: 3

Alabama's ALG640000 General Permit is in the Permit Management Oversight System (PMOS), but did not appear in EPA's General Permit Web Inventory. Also several of Alabama's GP's (ALG160000, ALG340000, ALG250000, ALG150000, and ALG060000) appear as expired in EPA's GP Web Inventory, but have already been reissued. All the master Alabama Industrial GPs that were expiring in 2012 have now been reissued. PMOS has been updated with the most current issuance/effective/expiration dates and number of facilities covered by each Alabama Industrial General Permit.

EPA Response: EPA/OECA has forwarded this comment to EPA's Office of Water for resolution. EPA's Office of Water separated received these comments from Alabama and fixed the errors in the EPA's General Permit Web Inventory.

Commenter: Alabama
Comment Date: 10/26/2012
Comment Number: 4

Below (the GP Web Inventory) is another example of information that has been released to the public which is not correct or updated. ADEM made comments on this prior to release and ICIS [and PMOS (Permit Management Oversight System)] is up to date with the new issuance dates. Again, it takes additional Department resources to verify these items and it is very concerning that ICIS is up to date, but information which I assume pulls from ICIS is not correct. The Department supports EPA's efforts for transparency to the public; however, if the information is not accurate, this creates additional workload for the Department and the public is given information which can lead them to incorrect conclusions. It also is repetitive and not an efficient use of resources when the Department has to update information in multiple databases.

For example, information must be included in ICIS and then the Department also has to update the PMOS database. PMOS has been updated. Also Eric Clecker has already updated the Master Industrial GPs in ICIS. We e-mailed Jackie Clark of EPA at the end of August that all the

master Alabama Industrial GPs that were expiring in 2012 had been reissued and PMOS had been updated. However, after checking the GP site this evening eleven Industrial GPs appear to have expired in 2012. Those eleven with incorrect dates are - ALG020000, ALG030000, ALG110000, ALG120000, ALG140000, ALG170000, ALG180000, ALG200000, ALG230000, ALG240000, and ALG670000.

EPA Response: EPA/OECA has forwarded this comment to EPA's Office of Water for resolution. EPA's Office of Water separated received these comments from Alabama and fixed the errors in the EPA's General Permit Web Inventory.

Commenter: Alabama
Comment Date: 10/26/2012
Comment Number: 5

In addition to the DMR Pollutant Loading Tool and the GP Inventory issues, see the following concerning the Health of Waterways App. So far, the major issues involve missing information. For example, Lay Lake was listed as unassessed and had no TMDL available. However, Lay Lake has been assessed and was on the 1996 303(d) list for multiple causes. TMDLs were approved in 2008. A similar story applies to the Coosa River at Pell City. Listed on the 1996 303(d) list for multiple causes and with an approved TMDL, the water is shown as unassessed. People using the App will likely call us to find out why their waterbody is not assessed or why there is no TMDL for it.

I noticed the same thing with Catoma Creek, although there were TMDLs available it stated there were not TMDLs available. Also, I noticed an issue with a station that has been delisted and has an attainment date of 5/26/11 stating the original basis for the listing was incorrect, but still appear impaired based on a 2008 reporting year status.

EPA Response: EPA/OECA has forwarded this comment to EPA's Office of Water for resolution. Douglas Norton (OWOW) noted that the issues related to TMDL data involve lag times in state TMDL list submissions and discrepancies in GIS dataset submissions. OWOW has saved this comment for future resolution, which will be done at the next release of the application.

Commenter: Alabama
Comment Date: 10/26/2012
Comment Number: 6

ADEM reported that on the ECHO facility report, the specific violation data cannot be easily correlated back to the base data in ICIS. On 9/27/2012, Tonya Mayberry reported that such a situation occurs with Permit No. AL0003093

EPA Response: EPA notes that the ECHO Detailed Facility Report (DFR) for AL0003093 does not have much in the way of violation data.

See: http://www.epa-echo.gov/cgi-bin/get1cReport.cgi?tool=echo&IDNumber=AL0003093

CWA/NPDES Compliance Status												
Statute:Source ID CWA:AL0003093	QTR1 Jul-Sep09	QTR2 Oct-Dec09	QTR3 Jan-Mar10	QTR4 Apr-Jun10	QTR5 Jul-Sep10	QTR6 Oct-Dec10	QTR7 Jan-Mar11	QTR8 Apr-Jun11	QTR9 Jul-Sep11	QTR10 Oct-Dec11	QTR11 Jan-Mar12	QTR12 Apr-Jun12
Non-compliance in Quarter	No	No	Yes	Yes	No	No	Yes	No	No	No	No	No
SNC/RNC Status »	C(manual)		D(DMR NR)	N(RptViol)			N(RptViol)					
Effluent Violations by NPDES Parameter:												
View effluent charts for all parameters: Only Charts with Violations All Charts Custom Output (or click on parameter names below for individual parameter charts)												

The DFR shows only RNC statuses of DMR non-receipt and RNC. There are no effluent, compliance, permit schedule or single event violations. EPA did see in ICIS that these RNC statuses have been overridden recently (on 11/5/12), since the last refresh of IDEA, which is the database supporting ECHO. This might be the cause of confusion. The data in ECHO is as of 10/19/12. The November refresh will hopefully be in production next week (week of November 19th).

Commenter: Kentucky
Comment Date: 9/14/2012
Comment Number: 7

Kentucky received a link to the "pre-release" version of the Discharge Monitoring Report (DMR) Pollutant Loading Tool. I was able to give it a quick look. There appear to be a lot of useful and interesting functions with this tool. My biggest concern is the quality of the data being used. From the way that it appears to be working, I suspect that the system is using the ICIS/PCS frozen data sets. When I ran a query, one of the largest dischargers and the most toxic facility that shows up is the "James Lash Residence" in Union, KY. In looking at why this is, the permittee is submitting his flow data on the DMRs in GPD instead of MGD. We found this when looking at an earlier version of the DMR Loading Tool, and corrected the flow data in ICIS. Since the frozen data is being used, any changes we make in ICIS are never reflected in the DMR Loading Tool. To add to our concern, we corrected this data in ICIS when we looked at the earlier version of this tool. This is not an uncommon problem. One of our supervisors is currently undertaking a project pulling ICIS data and correcting flow reporting data that appears to be erroneous. However, even as this gets fixed in ICIS, it does not get fixed in the frozen data set.

EPA Response: See response to Comment #1 and #2.

Commenter: Kentucky
Comment Date: 9/14/2012
Comment Number: 8

Kentucky has taken the annual data verification seriously. We have audited and corrected data in the specified areas to the best of our ability. However, we do not audit the DMR data as part of this process. Even if we did, we have the problem that a lot of the times the data was a reporting error on the part of the permittee and requires the submission of revised DMRs to correct. This takes a lot of time and resources.

EPA Response: EPA agrees with the commenter that error correction can require significant resources and notes that a switch from paper-based reporting to electronic reporting will help improve data quality and make the DMR submission process more efficient (e.g., requiring fewer resources). In particular, with electronic forms error handling can be done at the data entry stage to identify errors before they are submitted by the permittee.

Commenter: Kentucky
Comment Date: 9/14/2012
Comment Number: 9

While DMR data may never be perfect, the DMR Pollutant Loading Tool would be much more useful if it were based on data sets that were updated on some regular basis to reflect corrections and changes made in ICIS. While the annual frozen data sets may be appropriate for some uses, it is too static to be an appropriately applied to the DMR Loading Tool.

EPA Response: See response to Comment #1 and #2.

Commenter: Kentucky
Comment Date: 10/18/2012
Comment Number: 10

If there is no monthly average limit, it takes the daily max and multiplies it by 30 -- or 90, or 365. If there is no lb/day limit, it takes the concentration and flow to calculate a loading; even though the flow may have been taken on a different day from the concentration.

EPA Response: The Loading Tool uses best available data to make an estimate on pollutant loadings. The Loading Tool uses paired concentration and flow data for calculating pollutant loads (same outfall, facility, and monitoring period). The Loading Tool uses average values to calculate or sum pollutant loads when these data are available. The Loading Tool uses maximum daily values only when average values are not available.

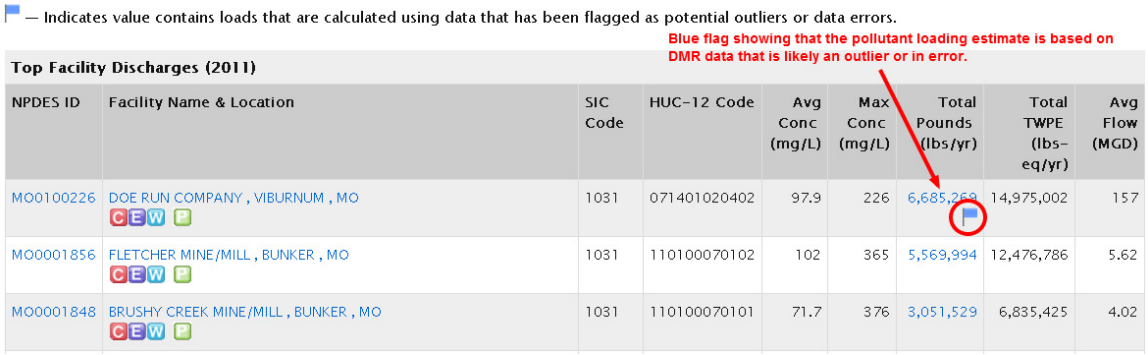
Additionally, ICIS-NPDES does not allow users to track DMR data at the daily level (e.g., flow or concentration values for each day). Consequently, it is not possible with the current ICIS-NPDES system to determine when a maximum concentration and flow data were recorded during a monitoring period. However, most permits require facilities to monitor average values and report these values on the DMRs. This means that the potential over-estimation of pollutant loads based on maximum concentration and flow values is relatively minor.

The "Technical Users Background Document for the Discharge Monitoring Report (DMR) Pollutant Loading Tool," which is available on the "User's Guide" tab on the Loading Tool, provides specific details on how pollutant loadings are calculated from DMR data. In particular, Table 3-8 and Table 3-9 provide the hierarchy for selecting pollutant concentration data and wastewater effluent flow data.

Commenter: Kentucky
Comment Date: 10/18/2012
Comment Number: 11

If the permittee reports in ug/l rather than mg/l, or, God forbid, GPD instead of MGD, the calculated loading will be off by a factor of a thousand, or a million or possibly even a billion (a thousand million). If this happens, the Loading Tool has no common sense; if the algorithm says National Copper and Smelting Co (AL0029483) discharged 8,621,535,615 lb/yr. of Zinc (it actually said this), it must be true. Anybody can go to ECHO and produce such misinformation at the click of a mouse.

EPA Response: See response to Comment #8. Additionally, as previously noted in the response to Comment #1 the Loading Tool flags pollutant concentrations, mass discharges, and effluent flows that vary significantly from monitoring period to monitoring period. The Loading Tool actual uses blue flags on the web page to alert the user that the pollutant loading calculation is based on DMR data that is likely an outlier or a data error.



Commenter: Kentucky
Comment Date: 10/22/2012
Comment Number: 12

Shortly after I became responsible for DMR submissions for the Kentucky Division of Water in March 2012, I discovered that some permittees had been incorrectly reporting their flow values by entering the quantity in gallons per day when million gallons per day was expected. I have been working to obtain corrections for suspect values and identified approximately 5000 flow values in excess of 100 million gallons per day, of which approximately half have been corrected to date. I have not as yet looked at values between 1 and 100 million gallons per day. I would expect that the Pollutant Loading Tool uses flow data to generate the pollutant load, and it is my understanding that the data for the pollutant loading tool is frozen from some time in the past 12 months. If my assumptions are correct, many facilities that have corrected their flow values could still show up as major polluters because the flow data has not been updated in the pollutant loading tool. I would also expect that KY is not the only state where flow values were incorrectly reported, and I'm fairly confident we still have approximately 2500 flow values ranging from 100 MGD to 100,000 MGD in ICIS (awaiting response from the permittees). Also, during my search for potential erroneous flow values, I found approximately 100 flow values where the facility indicated the flow was gallons per day, and the gallons per day unit code was entered when the DMR was entered. I assume the pollutant loading tool would look at the units for flow to use the DMR value in standard units field?

EPA Response: See response to Comments #1, #2, and #8. In particular, EPA appreciates the effort that Kentucky is taking to ensure DMR data quality.

With respect to the question: "I assume the pollutant loading tool would look at the units for flow to use the DMR value in standard units field?" - the Loading Tool extracts the correct unit from PCS and ICIS-NPDES for each matching flow value. After data extraction from PCS and ICIS-NPDES the Loading Tool converts all flow values to million gallons per day to ensure that subsequent pollutant loading calculations use the correct conversion factors.

Commenter: Kentucky
Comment Date: 10/24/2012
Comment Number: 13

I would suggest that EPA check all of its algorithms that are used to see whether or not they accommodate different "unit" measures that are reported as a part of the DMR, or if what the

loading tool does is assume a specific type of unit measure regardless of what is actually reported … it appears to us to be the latter.

EPA Response: EPA reviewed the algorithm for the Loading Tool and confirmed that the PCS and ICIS-NPDES data extraction and transformation process does account for different units for DMR data. In particular, EPA pulls data from ICIS-NPDES, converts all values to consistent units, and then performs the calculations to create pollutant loads. As noted in the response to Comment #12 the Loading Tool converts all flow values to million gallons per day to ensure that subsequent pollutant loading calculations use the correct conversion factors.

Commenter: Kentucky
Comment Date: 10/24/2012
Comment Number: 14

KY DEP also reported general concerns about the use of old frozen data, not updating for corrections, expecting States to QA all DMR data, etc. similar to the preceding specific concerns.

EPA Response: See response to Comments #1 and #2.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 15

We have data cleanup issues in TN and nothing prompts data cleanup like seeing something that is obviously wrong. On the other hand, data cleanup under duress can be difficult and stressful. When permit holder reports something to us such as where the flow units are incorrect, we'll enter the incorrect value and try to get the permittee to submit a corrected DMR. Sometimes it happens and sometimes it doesn't. From some of the smaller permit holders, there may be changing staff person on a fairly frequent basis and report of Gallons per day will come in for a few months and then be Million Gallons per day for a while and the units may not be specified. In some cases, DWR may not be able to tell if something is incorrect or not.

EPA Response: See response to Comment #8. In particular, EPA notes that it is the responsibility of the permittee to submit factual information to the NPDES program. Correcting incorrect DMR data is also an important aspect to enforcement oversight. If enough permittees submit erroneous data then this burden on the NPDES program can be significant. New electronic data collection tools can help reduce data entry errors that arise from changes in permittee staff, illegible handwriting, and errors in DMR value units.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 16

The logistics of the data improvement and cleanup may become an issue if the DMR loading tool is used much. It can add to our work load and we may not be able to respond very well to it. On the other hand, if the DMR loading tool is tried and gives poor results repeatedly there is a danger that the tool will be discounted as useless and not be used simply because of data issues.

The amount of work that may be necessary for help and support we may have to provide to get third parties to a reasonable result may also be a workload that will be difficult to handle.

EPA Response: See response to Comment #8 and #11. In particular, EPA's flagging potential outliers or erroneous data is a feature of the Loading Tool that alerts the user to loading calculations that seem in error. Additionally, users can "drill down" into each loading calculation to see how the Loading Tool uses DMR data from PCS and ICIS-NPDES to create pollutant loading estimates.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 17

Tennessee Division of Water Resources (DWR) has concerns about the data upon which the loading tool is based. DMR data is summarized, so a monthly average may be from a few days of discharge or a continuous discharge and there is no way to distinguish these situations. It is also difficult to interpret where storm water is having an influence. Some permitted features may contain a storm water component and others do not. Users of the tool need to realize some of these difficulties. This has nothing to do with data mistakes or misreporting, it is just the way the information is set up for compliance checking purposes.

EPA Response: EPA agrees with the commenter that some facilities have intermittent discharges. EPA groups these intermittent dischargers into two groups: (1) facilities that do not discharge for the entire monitoring period; and (2) facilities that discharge for only a part of the monitoring period (e.g., a facility that discharges for only two days out of the monitoring period). For the first group both PCS and ICIS-NPDES have data that identify when there is no discharge at a particular outfall for the entire monitoring period and the Loading Tool uses these data to correctly calculate pollutant loadings. However, for the second group the current version of the Loading Tool, Version 1.1, overestimates pollutant discharges. EPA notes that states do not all use the same method and codes for identifying intermittent dischargers where a facility discharges for only part of the monitoring period. In particular, ICIS-NPDES has three codes for reporting the "Duration of Discharge" parameter (i.e., parameter codes 50037, 82517, and 81381). EPA is aware of this inconsistency and has prominently noted this limitation of the tool on the main "Overview" tab of the Loading Tool. EPA is working on a correction to the pollutant loading calculations for the Loading Tool for Version 1.2, which is schedule for early calendar year 2013.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 18

Another level of concern is for data quality itself. One of our compliance staff I checked with last week reported 9 of 15 DMRs had a math error on it for the current month. When the DMR is reported that way and signed, it goes into the system even though the data point is probably an error. In addition, people making data entry to ICIS-NPDES also make errors. Not all errors will be caught and corrected. The loading tool depends upon information being reported correctly and entered correctly. But there will be problems with this and it will be difficult to catch and correct all. It may be that the person using the pollutant loading tool could look at

that oil-water separator that has millions of gallons per day discharge flow and know the units are wrong, but maybe not. When data are aggregated into a report the issue could skew things without the problem being obvious.

EPA Response: See response to Comment #16.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 19

Another concern is internal monitoring points are handled. TN has some internal monitoring points at which flow and other things are measured. These points are not all correctly identified as internal monitoring points. In some cases, it is simply more practical to sample the internal point rather than the final outfall. But the situations can get complicated.

EPA Response: Both PCS and ICIS-NPDES have data that identify when a monitoring point is an internal or external monitoring point. The Loading Tool uses these data to only calculate pollutant loads from external outfalls. EPA relies on the NPDES program to correctly label these monitoring points in PCS and ICIS-NPDES. As previously noted in the response to Comment #1, making DMR data publically available, even erroneous data, has the beneficial effect of allowing different perspectives from multiple stakeholders (e.g., states, regulated entities, public) access to all DMR data, which will help broaden the review of the DMR data and identify erroneous data that require correction.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 20

See attached example spreadsheet for Newbern sewage plant. Newbern has permit requirements that do NOT require flow to be reported on external outfall (permitted feature) 001. [See attached Excel Spreadsheet, Sample Flow Data Problem DMR Loading Tool, TDEC, NEWBERN STP.xlsx.] The permittee does report nutrients in pounds per day at Outfall 001. Both 01A and 01B are shown as external outfalls in ICIS-NPDES and both contribute flow to Outfall 001. Outfall 001 flow will be the combined flow of 01A and 01B. The pollutants for which loading is calculated that are not nutrients would need to be calculated for 01A and 01B using the respective flow and then summed. The loading for nutrients would be reported at 001. These situations really need someone familiar with the permit to figure out what is being presented. There are a number of site-specific situations that could pose problems – contaminated storm water monitoring, instream monitoring, various set ups for internal and external monitoring points.

EPA Response: EPA agrees with the commenter that NPDES permits and the corresponding monitoring and reporting requirements can be complex. This complexity arises from the need of this compliance monitoring to be flexible. NPDES permits control pollutant discharges on hundreds of thousands of facilities across 46 state and EPA NPDES programs. Each NPDES permit is different with different monitoring requirements that vary on such aspects as monitoring location, pollutant parameters, monitoring period, and monitoring type and frequency. It is the responsibility of the NPDES program to capture this complexity in PCS and ICIS-NPDES as both

systems have the capability to accurately model different monitoring requirements. In particular, both PCS and ICIS-NPDES have ways of identifying internal and external monitoring points.

EPA suggests that there might be better ways of tracking this facility in ICIS-NPDES. For example, the two monitoring locations (01A and 01B) are can be labeled as internal monitoring points with the single outfall (001) as the combination of the two internal monitoring points (01A and 01B). This suggested change would help reviewers not familiar with the facility avoid confusing internal and external outfalls.

EPA reviewed the EZ Search and Advanced Search (monitoring period) results for NEWBERN STP (TN0062111) using Version 1.1 of the Loading Tool. EPA identified that the Loading Tool is correctly calculating pollutant loads for Outfalls 01A and 01B. In particular, EPA identified that the Loading Tool correctly uses ICIS-NPDES data and correctly identifies Outfalls 01A and 01B as external outfalls, which is how these outfalls are identified in ICIS-NPDES. The Loading Tool correctly calculates pollutant loads for these two monitoring locations using the matching pollutant concentration data and flow data. For example, the Loading Tool uses average quantity data for “Nitrogen, ammonia total (as N)” to separately calculate pollutant loads for Outfalls 01A and 01B. The Loading Tool correctly sums the pollutant loads for Outfalls 01A and 01B to show the total discharge from the facility level, which is procedure recommended by the commenter.

The nitrogen and phosphorus pollutant discharges from Outfall 001 as not calculated by the Loading Tool. This omission means that the Loading Tool is underestimating pollutant discharges from this facility. EPA is aware of this inconsistency and is working on a correction to the pollutant loading calculations for the Loading Tool for Version 1.2, which is schedule for early calendar year 2013.

Commenter: Tennessee
Comment Date: 10/23/2012
Comment Number: 21

Situations where influent measurements are mistaken for effluent, where flow is not in the right units or where intermittent discharge is misunderstood as continuous can lead to pollutant loadings that may appear worse than they really are.

EPA Response: See response to Comment #17.

Commenter: Mississippi
Comment Date: 11/14/2012
Comment Number: 22

These are some concerns MDEQ has with the DMR Pollutant Loading Tool (from a data perspective):

The tool will determine if data is incorrectly entered in PCS: User guide indicates the tool will determine if flow data entered in PCS is "incorrect", by either comparing with previous reported flows, or by assuming that any flow over 5,000 MGD was erroneously reported. MDEQ

performs QA/QC on the data, to ensure the data reported is accurate. Furthermore, the regulated facilities also have the ability to check if the data reported is correct (via ECHO) and report a data error if applicable. Allowing the tool to change the values reported by the regulated community (based on a set algorithm) could result in erroneous loading amounts being calculated and published.

EPA Response: EPA agrees with the commenter that it is the responsibility of the permittee to submit factual information to the NPDES program and that NPDES programs have an added responsibility to correct erroneous DMR data. However, EPA disagrees with the commenter on the specific recommendation to not automatically change flow values that exceed 5,000 million gallons per day (i.e., over 5 billion gallons per day). EPA/OCEA consulted EPA's Office of Water on the types of facilities with the largest flows. EPA's Office of Water has a number of rulemaking efforts (e.g., CWA §316 Cooling Water Intake Structures, Steam Electric Effluent Guidelines) that involve facilities with the largest flows (e.g., nuclear power plants, iron and steel manufacturing facilities). These rulemaking efforts have conducting separate data collection activities (e.g., site visits, surveys) and regulatory analyses. These rulemakings confirm that the largest facilities discharge no likely to discharge no more than 2,200 million gallons per day (2.2 billion gallons). Consequently, any DMR flow value greater than 5,000 million gallons per day is almost certainly a data error.

EPA also notes that most flow parameters do not have effluent limits. This is important consideration as most quality assurance efforts involve fixing erroneous data that result in apparent effluent limit violations. Erroneous data that do not generate effluent violations are not prioritized for correction.

To help promote transparency EPA will identify all facilities and flow values that exceed 5,000 million gallons per day. EPA will post this list on the 'Users Guide/Technical Documents' tab of the Loading Tool with the release of Version 1.2.

Commenter: Mississippi
Comment Date: 11/14/2012
Comment Number: 23

The tool uses average concentrations and average flows to calculate the daily loading of each pollutant. The assumption made by the tool is that the discharge is continuous which simply isn't accurate. Furthermore, facilities are instructed by the state that this is an incorrect practice, yet EPA is using this same method to calculate loading values.

EPA Response: See response to Comment #20.

Commenter: South Dakota
Comment Date: 9/11/2012
Comment Number: 24

I did an EZ search for South Dakota POTWs and the solids pollutant classification. This came up with Sioux Falls as the #4 loading source in the state. Sioux Falls is the largest city in the state and discharges more than twice the next largest facility. Canova came in as the largest source. This is due to several data entry errors but it did give me an idea. You have the program set up

to identify potential data entry errors. Could you have it flag any flow greater than 20 MGD from a South Dakota facility as a potential data entry error? As I said earlier, Sioux Falls is more than twice as large as the next largest facility and it has a design flow of 15 MGD. We don't have anything in the state that can discharge anywhere near 20 MGD so if a flow greater than that shows up on a DMR, it is definitely an error.

EPA Response: EPA thanks the commenter for the suggestion. EPA will update its data flagging procedure to identify with a blue flag (see response to Comment #11) any South Dakota facility flow greater than 20 million gallons per day as a potential outlier or data error.

Commenter: South Dakota
Comment Date: 9/11/2012
Comment Number: 25

Tabor shows up as #2 on the list. There is a data entry error here also but there is also a problem with the loading tool. On the months with a discharge, it is calculating flow for the entire month instead of using the duration of discharge. A 10 day discharge was calculated as a 31 day discharge. This is also the facility the loading tool said it estimated the loading for 2 months but did not identify any month as being estimated.

Lead-Deadwood Sanitary District showed up as third on the list. This one identified a situation I had not thought of before. One of the outfalls on this permit is a combined sewer overflow with discharges that normally only last 15 minutes to an hour. The loading tool is calculating each discharge as lasting the entire month.

I'll try playing around with the tool some more and see if I can find any other ways to confuse it.

EPA Response: See response to Comment #17.

Commenter: Connecticut
Comment Date: 10/03/2012
Comment Number: 26

I checked the nutrient monitoring report forms for CT0101087 (average monthly concentration values for Ammonia as N for Outfall 001, 2010) and they do not cover the entire month as do the DMRs. I just went back to the DMRs and found that they reported average monthly concentrations of 0.0 mg/l for February, 1.5 mg/l for March and 0.1 for April. All of the other months of the year should read as 0.0 mg/l average monthly concentrations.

EPA Response: EPA thanks the commenter for these data corrections. EPA has updated the database supporting the Loading Tool.

Table 1: EPA and State Commenters on Version 1.1

Name	Organization	E-mail	Comments Date
Mark J. Cleland	Kentucky Department for Environmental Protection	mark.cleland@ky.gov	09/14/2012
Daphne Y. Smart	Alabama Department of Environmental Management	dsmart@adem.state.al.us	09/14/2012
Rowland Denny	Connecticut Department of Environmental Protection	rowland.denny@ct.gov	10/3/2012
Albert Spangler	South Dakota Department of Environment and Natural Resources	albert.spangler@state.sd.us	09/11/2012
Chris Sanders	Mississippi Dept. of Environmental Quality	chris_sanders@deq.state.ms.us	11/14/2012
Lawrence Bunting	Tennessee Division of Water Resources	lawrence.bunting@tn.gov	11/6/2012